

A medical researcher claims that less than 20% of adults in the US are allergic to a medication. In a random sample of 100 adults, 15 say they have such an allergy. Test this researchers claim with a significance level of 0.01.

$$n = 100$$
$$\hat{p} = \frac{15}{100} = .15$$

#1 $H_0: p = .2$
 $H_A: p < .2$

#2 $\alpha = .01$

#3 $z = \frac{.15 - .2}{\sqrt{\frac{(.2)(.8)}{100}}} = -1.25$



#5 Fail to Reject H_0



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